

## SAFETY DATA SHEET

Version 6.8  
Revision Date 08/07/2024  
Print Date 08/08/2024

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Ethylenediaminetetraacetic acid tetrasodium salt dihydrate

Product Number : E6511  
Brand : Sigma  
Index-No. : 607-428-00-2  
CAS-No. : 10378-23-1

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 4), H332

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Serious eye damage (Category 1), H318  
 Specific target organ toxicity - repeated exposure (Category 2), Respiratory Tract, H373  
 For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard Statements

H302 + H332

Harmful if swallowed or if inhaled.

H318

Causes serious eye damage.

H373

May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure.

Precautionary Statements

P260

Do not breathe dust.

P264

Wash skin thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P280

Wear eye protection/ face protection.

P301 + P312 + P330

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P304 + P340 + P312

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338 +

P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P314

Get medical advice/ attention if you feel unwell.

P501

Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Formula :  $C_{10}H_{12}N_2Na_4O_8 \cdot 2H_2O$   
 Molecular weight : 416.20 g/mol  
 CAS-No. : 10378-23-1  
 EC-No. : 200-573-9  
 Index-No. : 607-428-00-2

Component	Classification	Concentration
<b>Ethylenediaminetetraacetic acid tetrasodium salt dihydrate</b>		
	Acute Tox. 4; Eye Dam. 1; STOT RE 2; H302, H332, H318, H373	<= 100 %

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**SECTION 4: First aid measures****4.1 Description of first-aid measures**

No data available

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

No data available

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Sodium oxides

Combustible.

**5.3 Advice for firefighters**

No data available

**5.4 Further information**

No data available

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

For personal protection see section 8.

**6.2 Environmental precautions**

No data available

**6.3 Methods and materials for containment and cleaning up**

No data available

**6.4 Reference to other sections**

For disposal see section 13.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

No data available

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Personal protective equipment

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

##### Control of environmental exposure

Prevent product from entering drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                   |                                   |
|-------------------|-----------------------------------|
| a) Appearance     | Form: crystalline<br>Color: white |
| b) Odor           | No data available                 |
| c) Odor Threshold | No data available                 |

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d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	( )Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	No data available
Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Oxidizing agents

Aluminum

Nickel

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#### 10.4 Conditions to avoid

No data available

#### 10.5 Incompatible materials

No data available

#### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

LD50 Oral - Rat - male and female - 1,780 mg/kg  
(OECD Test Guideline 401)

Remarks: The value is given in analogy to the following substances:

Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt

LC50 Inhalation - 4 h - 1.5 mg/l - dust/mist

Remarks: The value is given in analogy to the following substances:

Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt

Dermal: No data available

No data available

##### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances:

Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt

##### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

(OECD Test Guideline 405)

Remarks: The value is given in analogy to the following substances:

Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt

##### Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Remarks: The value is given in analogy to the following substances:

Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt  
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt

##### Germ cell mutagenicity

No data available

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 471  
 Result: negative  
 Remarks: The value is given in analogy to the following substances:  
 Ethylenedinitrilotetraacetic acid,Tetrasodiumsalt  
 Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells  
 Metabolic activation: with and without metabolic activation  
 Result: negative  
 Remarks: The value is given in analogy to the following substances:  
 Ethylenedinitrilotetraacetic acid,Tetrasodiumsalt  
 Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells  
 Metabolic activation: with and without metabolic activation  
 Result: negative  
 Remarks: The value is given in analogy to the following substances:  
 Ethylenedinitrilotetraacetic acid,Tetrasodiumsalt  
 Test Type: In vivo micronucleus test  
 Species: Mouse  
 Cell type: Bone marrow  
 Application Route: Oral  
 Method: OECD Test Guideline 474  
 Result: negative  
 Remarks: The value is given in analogy to the following substances:  
 Ethylenedinitrilotetraacetic acid,Tetrasodiumsalt  
 The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt

### **Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

### **Reproductive toxicity**

No data available  
 No data available

### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.  
 - Respiratory Tract

### **Aspiration hazard**

No data available

## 11.2 Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (OECD Test Guideline 203) Remarks: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 114 mg/l - 48 h (OECD Test Guideline 202) Remarks: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt
Toxicity to bacteria	static test EC10 - activated sludge - > 500 mg/l - 30 min (OECD Test Guideline 209) Remarks: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt The value is given in analogy to the following substances: Sodium ferredetate
Toxicity to fish (Chronic toxicity)	flow-through test NOEC - Danio rerio (zebra fish) - >= 35.1 mg/l - 35 d (OECD Test Guideline 210) Remarks: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt The value is given in analogy to the following substances: Sodium calcium edetate hydrate
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - 25 mg/l - 21 d Remarks: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt



## 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d  
Result: 0 - 10 % - Not readily biodegradable.  
Remarks: The value is given in analogy to the following substances:  
Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt

## 12.3 Bioaccumulative potential

Bioaccumulation Lepomis macrochirus - 28 d  
at 21 °C - 0.08 mg/l (Ethylenediaminetetraacetic acid tetrasodium  
salt dihydrate)

Bioconcentration factor (BCF): 1.8  
(OECD Test Guideline 305)

Remarks: The value is given in analogy to the following substances:  
Ethylenedinitrilotetraacetic acid, Tetrasodiumsalt

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not  
conducted

## 12.6 Endocrine disrupting properties

No data available

## 12.7 Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

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## SECTION 14: Transport information

### DOT (US)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

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Not dangerous goods

**Further information**

Not classified as dangerous in the meaning of transport regulations.

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**SECTION 15: Regulatory information**

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US State Regulations**

**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**The ingredients of this product are reported in the following inventories:**

**TSCA** : All substances listed as active on the TSCA inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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**SECTION 16: Other information**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the

information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

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